REMARKS

This application has been carefully reviewed in light of the Office Action mailed March 7, 2005. Claims 1-25 are pending in the Application. Applicant respectfully requests reconsideration and favorable action of all pending claims in view of the following remarks.

Section 102 and 103 Rejections:

The Office Action rejects Claims 1-7 and 13-19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,057,915 to Squire et al. ("*Squire*"), and rejects Claims 8-12 and 20-24 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *Squire* in view of U.S. Patent No. 6,844,924 to Ruff et al. ("*Ruff*"). Applicant respectfully traverses.

The rejection is improper at least because *Squire* does not disclose detecting the presence of a previously undetected moving projectile by analyzing information in reflected energy reflected from a defined beam of eyesafe laser energy, as claimed by Claim 1 as amended.

Rather *Squire* involves detecting a projectile by focusing **infrared light** from a field of view on to an infrared focal plane array **and searching for the infrared signature of a fast moving projectile**. *See* Abstract, lines 8-16, Summary, lines 45-56, and Columns 3-4, lines 13-7. After the bullet is detected, the system tracks and ranges the bullet. Column 3, lines 13-16. ("The system has two basic modes of operation. If an incoming bullet is detected, the system switches to mode 2 during which it tracks and ranges the bullet.") Only after the bullet is detected is a laser used for tracking and ranging. Column 4, lines 9-49, "Mode 2-Tracking and Ranging Bullet." In particular, "mirror angular position information, laser radar pulse travel time and the missile spot position on the detector array are used by a computer to calibrate bullet trajectory information and to determine the source or origin of the projectile using known ballistic trajectory methods," Column 1, lines 59-64, and "the supervisor computer 34 calculates the trajectory of the bullet from the position data and calculates from the data coordinate origins of the bullet."

Thus, *Squire* does not use an analysis of **energy reflected from a laser** to **detect the presence of a previously undetected** moving particle, but rather focuses infrared light emanating from the relatively hot bullet to detect the bullet. This sort of detection of *Squire* can lead to false alarms in response to irrelevant flashes or reflections. Further, once

detected, *Squire* tracks the trajectory of the detected bullet using a laser, but does not detect the presence of a previously undetected moving particle.

In addressing the unamended version of Claim 1, the Office Action stated "Squire discloses in figure 1 a method comprising: transmitting 26 additional beam of eyesafe laser energy; receiving reflected energy from the beam; and analyzing information in the received energy so as to detect the presence of a moving projectile," but this is incorrect. As described above, in mode 1 of operation, *Squire* focuses **infrared light and searches for the infrared signature of a fast moving projectile** to detect the projectile. Further, in mode 2 of operation, *Squire* tracks the trajectory of the projectile, but does not **detect the presence of a moving projectile** by analyzing information in energy reflected from a laser, **but rather tracks the trajectory of a moving projectile**. Nevertheless, *Squire* does not **detect the presence of a previously undetected moving projectile by analyzing information in energy reflected from a laser.**

For at least these reasons, Claim 1 is allowable, as are the claims depending therefrom. Claim 13 and new independent Claim 25 are allowable for analogous reasons, as are any claims depending therefrom. Reconsideration and favorable action are requested.

Claim 6 is also allowable because *Squire* does not disclose detecting the presence of a previously undetected moving projectile by analyzing information in reflected energy reflected from a defined beam of eyesafe laser energy where the analysis includes detecting a Doppler shift in the received energy.

As described above, *Squire* searches for the infrared signature of a fast moving projectile to detect the projectile, which clearly does not involve detecting a Doppler shift in the received energy. Further, *Squire* does not even disclose detecting a Doppler shift when it is tracking the previously detected bullet (in mode 2). *Squire* does disclose calculating "bullet trajectory information" based on mirror angular position, laser radar pulse travel time and the missile spot position on the detector. (Column 1, lines 59-64), but it does not disclose detecting a Doppler shift in received energy. Indeed, it does not appear that mode 2 tracking of the previously detected bullet in *Squire* would have any need to calculate a Doppler shift in any received energy.

With respect to Claim 6, the Office Action stated "it is inherent that Squire's analyzing unit includes the detecting [sic] a Doppler shift in the received energy to obtain (velocity and direction data)," but this is incorrect. As described above, *Squire* states that during mode 2 of operation, the "supervisor computer 34 calculates the trajectory of the

bullet from the position data and calculates from the data coordinates origins of the bullet," but *Squire* makes no mention of detecting a Doppler shift in the received energy nor is such inherent in *Squire*. Rather, it appears that *Squire* uses mirror angular position information, laser travel time, and missile spot position to determine the bullet trajectory (Column 1, lines 59-64), and that a Doppler shift is not calculated to obtain velocity and directional data as suggested in the Office Action. Indeed, Applicant has found no mention of the calculation of a Doppler shift in *Squire* or the calculation of velocity information.

In any event, the M.P.E.P. requires that:

> to establish inherency, the extrinsic evidence **must make clear that the missing descriptive matter is necessarily present in the thing described in the reference**, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. . . . In relying upon the theory of inherency **the examiner must provide a reasonable basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art**."

M.P.E.P. § 2112(iv) (emphasis added) In this case the Examiner has provided no rationale or evidence showing the thing not disclosed (detecting the Doppler shift) efrom the reference, stating only that "it is inherent that Squire's analyzing unit includes the detecting of a Doppler shift in the received energy to obtain (velocity and direction data)." Thus, regardless of the fact that this missing limitation is not inherent in *Squire*, as described above, the rejection is also improper for the procedural reason that the rejection fails to comply with the requirements of the M.P.E.P regarding rejections based on inherency.

For at least these reasons Claim 6 is allowable, as are the claims depending therefrom. Claim 18 and new independent Claim 25 are allowable for analogous reasons, as are any claims depending therefrom. Reconsideration and favorable action are requested.

CONCLUSION

Applicant has now made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other apparent reasons, Applicant respectfully requests allowance of all pending claims.

If the Examiner feels that prosecution of the present Application may be advanced in any way by a telephone conference, the Examiner is invited to contact the undersigned attorney at 214-953-6447.

Applicant does not believe that any fees are due. However, the Commissioner is hereby authorized to charge any required fees and credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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